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# AN INTRODUCTION TO LANDSCAPE ARCHITECTURE

SECOND EDITION

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# THE GARDEN IN HISTORY

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## LEGACY OF THE PAST

A review of the history of landscape design begins with emerging and developing societies based on agricultural productivity and a symbolic approach to the universe. The gardens and urban environments, which were created, reflected both the relationship of society to nature and the structure of the society itself. The role of plants and gardens in the city and the surrounding agricultural countryside varied according to climate and attitude. In time, essentially two systems of landscape design evolved, one based on geometry, and the other on nature, although the rationale and meaning has varied with time and place.

In spite of the fact that many gardens and urban spaces were products of dictatorship, power, and personal wealth, it is of value to trace the connection between the form, the underlying concept, and the geographic setting. If we can make a clear connection

Form and concept in the gardens of the world, idea of an idealized garden, protected, shaded retreat, a vast expression of geometry and mathematical proportions. Garden word Hebrew, to protect or defend, implying a fence or enclosure and *eden* or *eden*, meaning pleasure or delight, enclosure of land for delight & pleasure

between form and concept in the great gardens of the world, be it an idealized paradise garden, a protected shaded retreat, a vast expression of geometry and mathematical proportions, an expression of nature, or a botanical collection, it will help us to understand why they look the way they do and, as a result, help in the development of forms and design suited to our own time and location. Perhaps the most difficult aspect of design today is finding concepts as simple and strong as those underlying the gardens of the past. Thus, as we examine briefly the forms in response to climate and context, the expression of attitudes and ideas, we must think about the way in which our own particular social and environmental conditions should be reflected in contemporary landscape design and consider how it might differ.

To give some focus to the history of landscape design in gardens and parks, it is convenient to deal in prototypes. Divided into two major categories, the architectural and the natural, more specific investigation reveals further differences in organization, use, symbolism, and setting which, together, add up to significant varieties. The prototypes are basically ideal forms (rarely achieved) based on three sources: (1) literature; (2) illustrations, and (3) visible remains. Literature may be prescriptive or descriptive, the former tending to be contemporary whereas the latter may be of any time. Prescriptive literature consists of advice on laying out a garden, written for contemporary use. Descriptive literature usually comprises accounts by travelers and others who visited the gardens and parks at the time of their construction, height of maturity, or decay. In either case, the components, details, planting, and objectives are evident and can be synthesized into an imaginary prototype. To make this easier, we can consult old prints and illustrations and, in some cases, photographs made at the time of, or subsequent to, the moment of creation. Final evidence is obtained from remains of the gardens where they existed and where they have not been altered too much with time and remodeling. The remains of gardens, however well preserved, have usually, except in recent prototypes, undergone change, but the experience of the setting, scale, and certain unchanged details and spaces is invaluable and highly recommended for students. Together, these sources and methods build up to an understanding of the gardens, their context and organization, illustrating the application of design principles imbued with symbolism and aesthetic qualities.

In my attempt to portray the concepts of landscape architecture many of the historical sketches in this chapter are based on several sources. They are thus often combinations of the way the place looks today,

the way it appeared in early prints and illustrations, and the way I think the designer intended it to look.

Although it is perhaps more interesting and often more convenient to illustrate and describe specific examples in developing prototypes, it must be remembered that each specific garden is different in detail as a reflection of the site, the client, and the designer. Together, the examples and prototypes constitute the vocabulary of landscape architecture from which current practice has grown.

In addition to the role of historical studies in illustrating design principles and helping us to understand our own time, the increasing concern for heritage landscapes and the restoration of significant gardens and parks, which have fallen into disrepair, requires landscape architects to have understanding of the originals.

## LANDSCAPE DESIGN AND AGRICULTURE

If we define landscape according to its original Dutch meaning, as an organization of fields and villages, an expression of community use and impact, then it is legitimate to link it with *Design* implying the marking out or designation of land or objects for some social purpose. With these definitions there is no distinction as to whether landscape design is an artistic or a functional endeavor. Many of the agricultural landscapes of the world, organized on purely functional principles, are considered attractive. Much can be learned from the purposefulness of design that is to be found in primitive systems of intensive cultivation and habitation where the basic needs of shelter and privacy are provided with the simplest of materials and in the most convenient ways. Beauty or aesthetics as we understand these terms today were not uppermost in the minds of the people who created these landscapes. Yet, in most cases, where they understood the land and the environment, the organization of fields, terraces, buildings, roads, and shelter belts which the people produced, often over generations and constantly subject to change, had a sense of fit and appropriateness that gives to the landscape a quality satisfying to the artist and the farmer alike. Even in more artificial situations where design was linked with aesthetics as in gardens, architecture and urban design, the best examples frequently exhibit a sense of logic, inevitability and a relationship to context equal to that of a well-organized and productive farm.

## ORIGINS OF THE GARDEN CONCEPT

The meaning of the word garden can be traced to the Hebrew *gan*, to protect or defend, implying a fence or enclosure, and *eden* or *eden*, meaning pleasure or de-

pleasure garden character of mythology and civilization  
 ancient cultivation & irrigation word paradise (emerald like)  
 Has been re-very branched into 4 streams, Garden of Eden  
 ancient civilization symbolism attached to the garden  
 contributions and plants olive, thorn, fig and vine

When starvation was a recurring  
 phenomenon of natural threat

light Thus in the contemporary English word garden we have a combination of the two, meaning the enclosure of land for pleasure and delight

The concept of the pleasure garden perhaps originates in mythology, whereas its layout and organization seem to derive from ancient cultivation and irrigation practices. Most of the major religious faiths describe gardens or paradise at the beginning of time or the end of life on earth. The promised garden of Mohammed was said to be filled with groves of trees and fountains. Here enjoyments which lasted for mere moments on earth were prolonged for a thousand years. There are also legends of the Garden of Eden in which God placed Adam and Eve. This is described in Genesis I and II as a park created by God in which there were all kinds of trees, delightful to see and bearing good fruit to eat and, of course, the tree in the center that yielded knowledge of good and evil. There was also a river which branched into four streams on leaving the park. The image is vivid and persistent even in modern times. Everyone knows what is meant by Eden. This universal knowledge gives meaning to book titles such as *East of Eden* or *Eden in Jeopardy*. Similarly, a nightclub called *The Garden of Eden* needs no further explanation.

In addition to the symbolism attached to the garden, early civilizations attributed special meaning and significance to certain trees and plants such as the olive, the thorn, the fig, and the vine. In times when starvation was a recurring phenomenon, it is not unnatural that trees, the longest living things known to

man, should be revered for the fertility, life, and nourishment they represented.

Thus in our deepest ancestry there are strong myths and legends whose meaning may now be obscure but which, nonetheless, were influential in early thought and civilization. They are still part of our cultural heritage and partly responsible for the attitudes and emotions we hold today and, no doubt, for our unquenchable interest in plants, gardens, and gardening.

### BABYLON, EGYPT, AND PERSIA

If the origins of garden layout and form also lie in agricultural practices, we may regard the fenced vegetable patch as the original prototype. As leisured segments of society could be supported by the productivity of settled civilizations, such as those of the Euphrates Valley around 3500 BC, so gardens were made for pleasure and as representations of paradise. True to their origins, the dimensions and shape of planting beds were those of the fields. Irrigation channels and ponds were incorporated for functional reasons, as well as for the sensuous enjoyment of water in a hot climate. Shade was provided by forest trees planted in regular groves, and the garden was protected with a wall to keep out animals and intruders. The heads of state and the ruling classes lived in palace complexes of sun-baked brick with gardens of this type. The Hanging Gardens of Babylon were unique. This great monument is said to have occupied four acres and to have risen in a series of planted and irrigated roof

The trees & longest living things to man & shall be  
 revered for their fertility, life, and nourishment  
 they represented. 3500 BC. Babylonian model  
 for pleasure and representations of paradise



FIGURE 2.1  
 Hanging Gardens of Babylon,  
 3500 BC

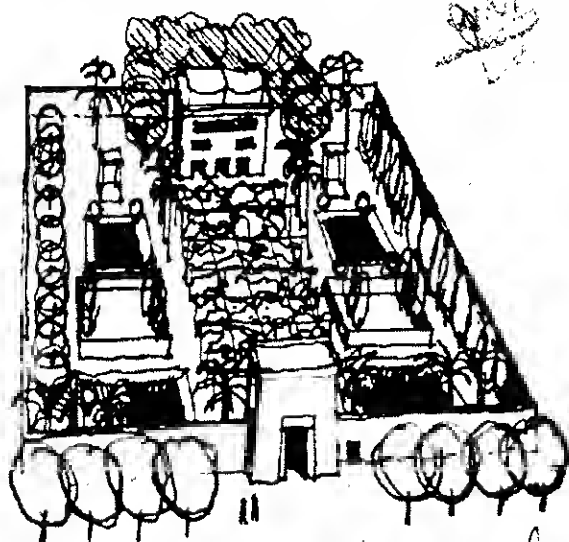
terraces to a height of 300 feet from which views of the valley and the surrounding desert were obtained (Fig. 2 1)

The Nile Valley was another center of early civilization. Egypt's long period of preeminence lasted from 3500 to 500 BC. The religious and symbolic significance of certain trees and flowers such as the lotus, the papyrus, and the date palm gave rise to the use of plants for ornamental purposes. The rich built residences and walled gardens in the agricultural countryside. The officials' garden at Thebes, of which there are good records, is probably typical. It consists of a rectangular and axial arrangement of flower beds, ponds, enclosures, and a vine trellis under which one walked from the gate to the house. Fruit trees were planted for shade. There were irrigation channels and garden pavilions and the garden was surrounded by a high wall (Fig. 2 2).

Much later, about 500 BC, the kings of Persia created lavish formal gardens for delight, consecrated to joy, love, health, and luxury. A Persian palace garden of this era would have irrigation channels running through it as though it were a field of some economic crop. Here, guarded by high lookout towers and walls, fruit trees and scented flowers were cultivated between rills of water. The Persian garden has been described by Sorensen as a stylization of the agricultural landscape employing water for irrigation and air cooling and imbued with symbolism.<sup>1</sup>

FIGURE 2 2

The house and garden of an Egyptian government official at Thebes, 2000 BC.



These early attempts at garden design in the ancient civilizations of the fertile crescent led through different cultural sieves and over a considerable period of time to two major prototypes—the Italian garden and the Islamic garden.

## CHINA

A second major cradle of civilization and source of garden design was the Orient. As a center of civilization, China had reached a climax in its development around 600 BC. The effects of deforestation were recognized and there was an established system of controlling tree cutting and forest management. The tradition of roadside tree planting dates back to this time. Cities were planned on a grid system with wide tree-planted streets oriented north-south and east-west. The hierarchical, axial, and symmetrical organization of rectangular enclosures represented the cosmos and reflected the teachings of Confucius on which that society was structured. Confucianism provided a code of rules for social behavior and relationships. The places of daily routine, e.g., house, palace, temple, were thus organized around the rules, conventions, and rituals of social and political institutions dealing with the relationships between the emperor and the high government officials, parent, wife, children, friends, strangers, and so forth. The Palace of the Forbidden City in Peking was designed as a series of spaces or enclosures (representing purifications) aligned along a major axis rising up gradually from one level to a higher one before finally reaching the inner sanctuary of the emperor. The ordinary house, although rarely reaching such extremes, was laid out by similar principles.

As though to modify the stifling effect of Confucian order, obsessed with interpersonal relationships, the Chinese adopted Taoism as a counterforce, concerned with the relationship of the individual to nature. In time, Buddhism made strong inroads into Chinese philosophy. Its central reverence of nature and meditation added strength to the Chinese interest for natural landscape and the laws of nature.

Landscape gardening (whose origins can be traced back to the eleventh century BC), in the seventh and eighth centuries BC, attempted to recreate idyllic scenes of the artist and applied the rules of painting and poetry to the garden. The Chinese word for landscape, *shanshui*, means mountains and water. These opposites were regarded as contrasts, not opposing forces.

<sup>1</sup> Carl I. Sorensen, *The Origin of Garden Art* (Copenhagen: Danish Architectural Press, 1963).

See also: Persians created lavish formal garden for delight, consecrated to joy, love, health and luxury. Persian palace garden with irrigation channels running through it, guarded by high lookout pavilions, walls, fruit trees and scented flowers.

(as Taoism was a contrast and therefore complementary to Confucianism) The view of the universe was that it represented a dynamic equilibrium between active and passive forces constantly changing and in motion (it was not regarded as wild) The yin-yang is a harmony between contrasting forces and forms such as rivers and mountains and woman and man. Within the harmonious balance of nature, man was seen as an integral part, no more or less important than any other element. Harmony resulted from a continuous series of balanced contrasts in the environment. This became the underlying concept of the designed gardens which attempted to recreate the essence of natural landscape

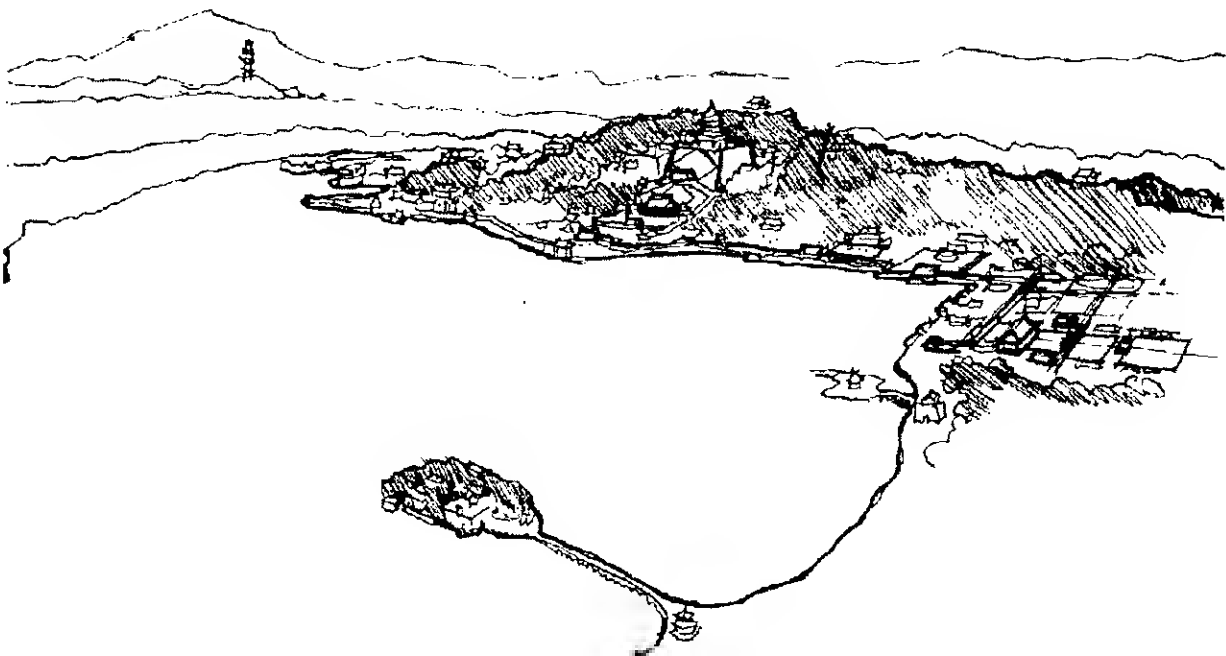
There is considerable variety in Chinese gardens depending on the date and the place, but for our purposes (in search of prototypes), oversimplification leads to two main forms. First, imperial gardens, built as settings for the summer palaces of the imperial families, were large estates. Consisting of mountains, forests, streams, lakes, and islands, often stocked with exotic plants and animals from distant countries, they were frequently furnished with bright pavilions and bridges for the amusement of the royal party, removed

temporarily, as they were, from social and political life. The pavilions in the large gardens were often built for special purposes, e.g., viewing the moon or lotus flowers. The second major form derives from the smaller private gardens attached to town dwellings and suburban villas. These belonged to landlords, rich merchants and bureaucrats. But, regardless of whether it was a large estate or a small town garden, the objectives were the same: to create a symbolic landscape in which the contrasting forces of nature were harmoniously arranged as a setting for the individual in contemplation or for a release from the conformity of social life

The summer palace near Beijing is representative of the large royal landscape parks created specially for imperial indulgence in the beauties of nature (Fig. 2.3). Its history as a special place goes back over a thousand years. In the twelfth and thirteenth centuries a lake was dredged and a productive landscape of well tended fields created. The scenery was considered so beautiful that it inspired poetic description and a favorite pleasure for the aristocracy was to stroll along the lake shore taking in the perfume of lotus flowers which grew profusely. It was not surprising that this idyllic

FIGURE 2.3

The summer palace near Beijing. Construction started in 1749



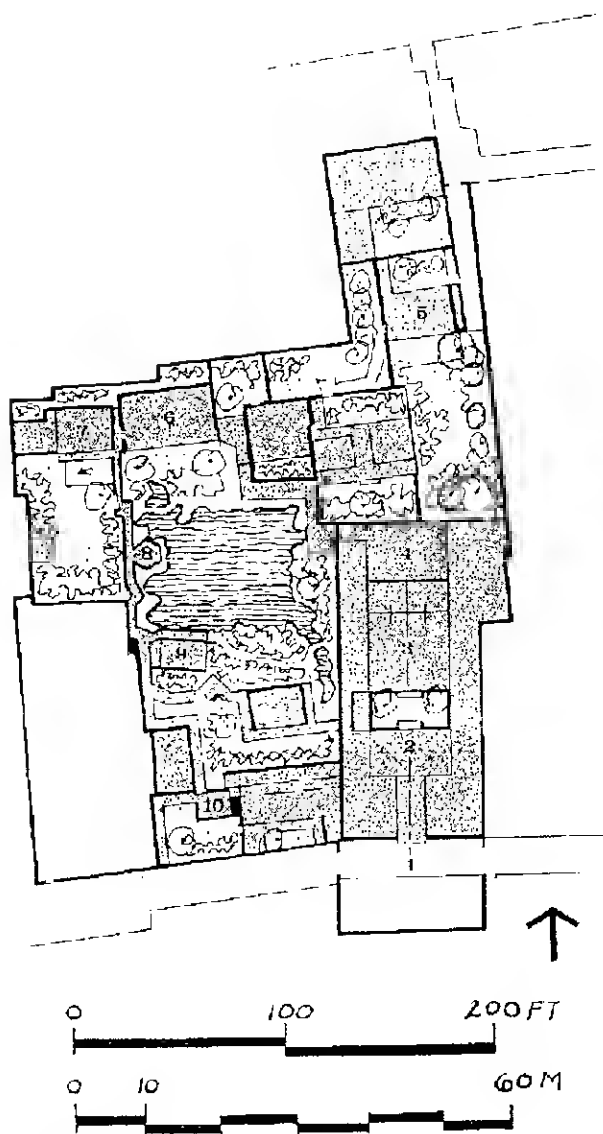


FIGURE 2.4

Plan of Wang Shi Yuan at Suzhou. (1) Front gate, (2) chair hall, (3) reception hall, (4) hall of gathering elegance, (5) hall of ascending to the clouds, (6) hall for viewing the pine and seeing a pair tiling, (7) Late Spring Studio, (8) pavilion overlooking pond, (9) Washing Cap strings, (10) lute room

site was selected as the location for a summer palace by Emperor Qianlong (1736–1795), fourth emperor of the Qing dynasty. Work on the project began in 1749. The lake was enlarged and artificial hills built. As it began to take shape, it was given the name "Garden of the Clear Ripples" and the hill to the north of the lake was called "Longevity Hill." The landscape was then fur-

nished with a series of pavilions, spacious studios, majestic halls, and towers or pagodas which added to the charm of the scenery and provided places from which to enjoy it. In addition to residential quarters, the buildings served other specialized functions such as holding court, celebration of birthdays, recitation of poetry, feasting, and so on. In all, over 100 structures were carefully located on the slopes of Longevity Hill. The complex took 15 years to complete and covers 290 hectares (823 acres). As with so many historical artifacts, what we see today is the result of two rebuildings of the original layout which was destroyed in 1864 and again in 1900 by foreign powers. Nonetheless, the scale and concept of an imperial landscape park can be experienced.

Wang Shi Yuan (the garden of the master of the fishing nets) is an interesting example of a private town garden (Figs. 2.4 and 2.5). First built in the twelfth century by a bureaucrat, it was given its name by the owner who longed for the simpler life of a fisherman. Over the years, the house and garden changed owners, fell into disrepair and were rebuilt several times. The garden which we see today is largely the conception of Qu Yuancun who acquired it in the late eighteenth century. It was not unusual for a scholar trained in classics and literature to design his own house and garden and this is what Qu did. As with all gardens, it has been embellished and altered subsequently but it illustrates the essential characteristics of the type.

The house, oriented north-south consists of a series of axially related formal reception rooms and a courtyard on the ground floor, with living quarters on the second floor. The subdued interiors contrast with the fanciful main garden reached through a side door. The pond is the main focus as well as the physical center of the garden. The full extent of the water is hidden and two stream-like extensions crossed with stone bridges give the impression that it continues into other parts of the garden. Three buildings overhang the pond offering different views and cooling proximity to the water. Other buildings and walls further back virtually enclose the area, but they are low in height and masked by rocks and trees increasing the illusion of space. Paths and corridors connect the pavilions which have allegorical or symbolic titles. To the west, entered through a gate in a wall, lies a small courtyard that contains a room called "Late Spring Studio" and a moon viewing terrace. Against the south wall is an arrangement of rocks with a spring fed pool. Half seen through fretted windows in the south wall is a plant nursery. To the east is another enclosed garden in front of the "Hall of Ascending to the Clouds" and another building, the "Lute Room" is almost hidden to the south of the pond by a rock construction. It faces



FIGURE 2.5

Wang Shi Yuan View from pavilion overlooking the pond

a narrow garden with bamboo and rocks. This is a set piece to be viewed from within.

The entire garden takes up a mere 1½ acres but its complexity, division of space, and control of sight-lines, views, and circulation gives the impression of a much larger space in spite of its many buildings and walls. The effect is not overwhelmingly architectural due to the pervading sense of naturalism and the avoidance of evident order. Buildings do not face each other and the interpenetration of trees and shrubs, rocks and water mask but do not conceal them.

Therefore, in ancient China, we find a rigid, rectangular and axial city, palace and house forms contrasted with the natural appearance of public parks, burial grounds, landscape gardens, and hunting parks. Both were the product of symbolism, the city plan reflecting the ancient conception of the universe and the role of the emperor as intermediary between heaven and earth.

The love of nature, evident in the pleasure gardens, reflects the original symbolic meaning attributed to landscape elements, mountains and lakes (shan and shui) and the contrasts of natural form. The religious philosophies of Taoism, Confucius, and Buddha relied upon nature to induce spirituality and reveal the inner harmonies of humans.

The ideal Chinese house had an enclosed garden. The garden was used for a variety of purposes: recreation, rest, study, meditation, and appreciation of the processes and aesthetics of nature. Privacy and quiet were essential. Symbolism was prevalent in every feature and in the arrangement. Water, as a balance to land, was essential for perfect harmony; its constantly changing appearance a reminder of the continual motion of the cosmos. Rocks contained all the creative forces of the Tao and were symbolic of wilderness and mountains. Plants symbolized man's life in



the universe and each one held traditional meaning for the viewer. The entire garden was a symbol of the universe.

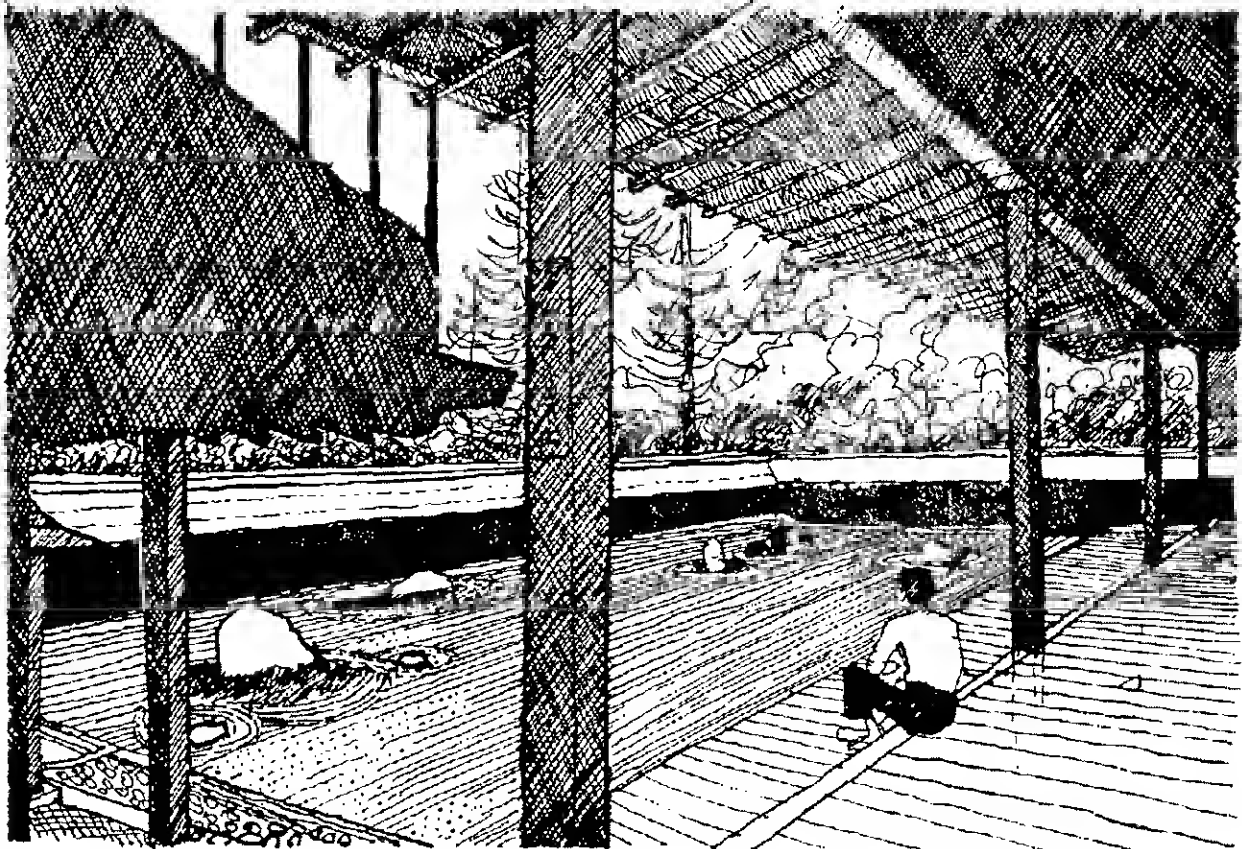
## JAPAN

The island nation of Japan, lying close to the northern shores of China, fell inevitably within its cultural sphere of influence. By 550 AD, Buddhism with its concept of an earthly paradise which had intensified the Taoist's interest in nature and contributed to the typical garden forms in China, was introduced into Japan, where already the Shinto religion had evolved. The latter, with its rudimentary emphasis on the processes and forms of nature, was receptive to the more sophisticated Chinese philosophy and garden design. A very strong religious doctrine took hold in Japan and dominated that society for the ensuing 13 centuries.

The historical development of the Japanese garden is exceedingly complicated and the early garden forms which were adopted by nobles, were heavily influenced by religious beliefs, symbolism, and Chinese influence in varying proportions. Meditation was the garden's chief purpose, through which the meaning and purpose of life was revealed. Gardens of the Nara period (645–784), often built by craftsmen from Korea and China, included lakes and rocks arranged to resemble nature based on the Chinese model. Subsequent periods, especially those associated with the location of the capital at Kyoto, saw the refinement of this garden type as a pleasure ground representing paradise and within which imperial courtiers amused themselves, boating on the lakes, writing poetry, and discussing aesthetics. The gardens, too, contained symbols of longevity and purity, as well as allusions to specific places in Japan. To the initiated, then, the garden could be read and enjoyed like a book. The

FIGURE 2-6

Ryuan-ji. A Zen dry garden dating back to 1500.



importance of Zen Buddhism in the Kamakura period (1185–1392) brought new concepts to life. Zen contrasted to the more formal Buddhist symbol-laden and elaborate doctrine. The garden was seen more strictly as an aid to meditation. For this purpose it was enclosed with a wall, and the relationship of the viewer to the garden was fixed. Later, during the Muromachi period (1393–1568), the dry garden, of which Ryoan-ji is a prime example, was produced in a time of nostalgia for the eleventh and twelfth centuries. The dry garden was the ultimate Zen aesthetic. Temples contained dry gardens as places to find spiritual peace in turbulent times.

*Ryoan-ji* is a small, enclosed, inward looking garden made of simple materials conducive to meditation, viewed from a veranda of a temple building (Fig. 2.6). It contrasted to the more lavish gardens of previous periods and ideals. This garden forms part of a Zen temple (formerly a nobleman's estate). Over time buildings have been destroyed and rebuilt, but the garden has existed since approximately 1500 BC. The enclosure measures 75 feet by 30 feet wide and is approached and viewed from a wooden veranda raised above the ground along one side in front of the Abbot's rooms. The enclosing wall of clay with a tile roof is approximately 7 feet high and the surrounding forest can be seen beyond. The sky is above. The rectangle contains 15 stones in 5 uneven groups set in coarse sand which is raked in circular pattern around the stones and in straight lines elsewhere. The only vegetation within the enclosure is some moss around the stones. The composition is framed by a border of stones, more complex under the veranda and building eaves, and quite simple on the wall sides. The Zen priests prefer that the arrangement of stones be given no specific meaning. Their value is in improving meditation leading to images originating in the observer.

Within the space of the garden, framed by the wall, images are compressed that extend from a view of landscape that is cosmic, to a pinpoint focus on matter which is microscopic. You can refer immediately to the native landscape that is reflected—the rocks stand like the rugged islands in the waves of an ocean, an image so familiar after the native coastline; or they rise with the thrusting volcanic rhythm of the mountains, the sand swirling around their base like cloud lingering on the lower slopes. The garden encompasses the depth of vision, the sense of space and the grandeur of scale that was explored by the painters, but by virtue of its abstract form, it offers further experience. As the eye closed in from the panorama and the illusory horizon is reduced, the wavelike patterns of the sand flow with the force of the current rushing against the stepping-

stones of a river. When you concentrate further on this wave-like motion, the raw image itself is revealed. The ripples of the sand flow as patterns of energy, as lines of force on some molecular scale, polarized around the stones. The wave motion is itself the fundamental image, rising and falling, but never actually moving, only appearing to move.<sup>2</sup>

The Zen dry garden is a perfect reflection of the monk's life, imbued with simplicity and austerity, leading to spiritual enlightenment.

In the Edo period (1620–1645) political power moved to Tokyo (Edo). The Emperor, whose power was merely symbolic, remained in Kyoto and spent time embellishing court and family life with the arts. Many of the earlier garden concepts were reexamined and brought together in what is usually called the stroll garden. This is the second type of garden most commonly associated with Japan. Several good examples exist in Kyoto.

The idea of the stroll garden was the creation of a series of views and experiences in the garden. In this sense it resembled the gardens of China, although the route to be followed was more clearly prescribed. Ideally it followed a clockwise route around an irregularly shaped lake and was laid out with bends and turns in relation to planting and topography such that the whole garden could not be seen at any one time. Each view was carefully composed and framed. Buildings, the villa, the teahouse, the temple, and bridges and other garden structures featured unobtrusively in these views as did rocks, pebble beaches, and planting. The path, itself, would consist of various materials and forms: gravel, cobbles, stepping stones. Symbolism and allusion pervaded the elements and their composition: rock, streams, and plants that were carefully pruned to emphasize their essence.

The illusion of space and landscape continuity was a major goal of the Japanese garden. The concept of borrowed landscape, i.e., opening up a view of a distant valley or mountain while concealing the garden boundary, was frequently applied. To aid the illusion, the trees inside the garden were the same species as those in the distant view. Other techniques such as planting large trees in the foreground and smaller ones in the background, or placing a large hill in front of a smaller one, also contributed to a sense of distance and space within the garden. It is not often discussed, but these gardens were also often seen by the emperor and his courtiers from a boat, revealing the same elements and views from another angle.

<sup>2</sup>Holborn, Mark. *The Ocean in the Sand* (Boulder, Colorado: Shambhala Publications, 1978).

At the Katsura Imperial Villa near Kyoto we find all of these features and concepts combined into a magnificent stroll garden (Figs 2.7 and 2.8). The villa, which also remains intact, is a fine example of Japanese architecture. Together they illustrate the idea of integration which typifies the national Japanese house and garden. It also demonstrates the adaptable architectural form. Built in the Edo period over several years starting in 1620, it is thought to be the conception of Prince Ioshihito, a brother of Emperor Goyozai. Many of the views are based on an eleventh century novel and the garden is imbued with literary allusions to the initiated.

The villa would be approached through a series of gates and along paths following an indirect route to

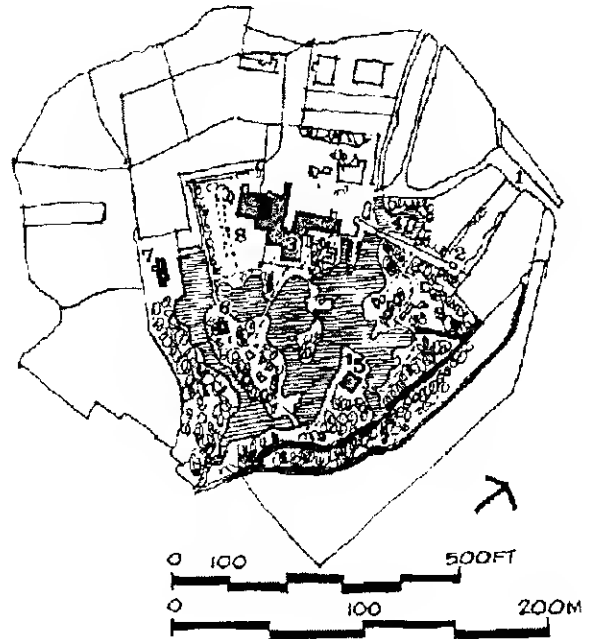
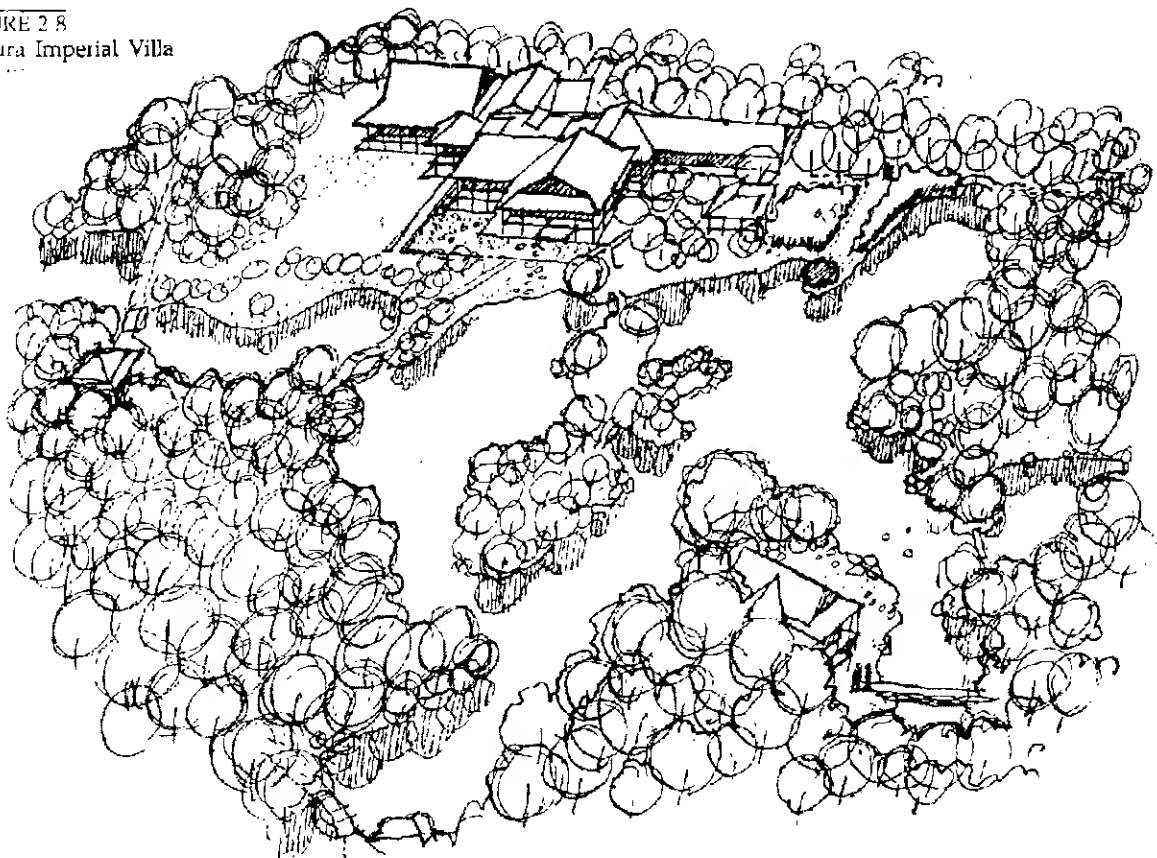


FIGURE 2.7

Plan of Katsura Imperial Villa garden at Kyoto, started in 1620 (at right). (1) Front gate, (2) Imperial gate, (3) villa, (4) boathouse, (5) Shokin-Tei (tea house), (6) Onrin-Do (Buddhist temple), (7) Shoi Ken (a large pavilion), (8) riding ground

FIGURE 2.8

Katsura Imperial Villa



the main door at the side of the villa. The door itself is not seen until the last moment. From the building, raised for protection from floods and for ventilation, specific views of the garden can be controlled by sliding screens or the entire front can be opened up to the garden which lies to the south. The villa consists of a series of units, built on the tatami mat module, added together and forming an informal edge on the garden side. The orientation and design of the buildings permits winter sunshine to enter but summer sun is shaded. (The building also faces the full moon in autumn.) The central feature of the garden is a lake with five islands.

Along the pathway, the lake is always present. The stroller encounters landscape views composed with trees, shrubs, rocks, a roofed bench or stone basin, lanterns, stone and wooden bridges, a waterfall and a pebble beach reminiscent of a famous scenic coastline in Japan. A rustic pavilion on top of a hill provides a place to view the moon reflected in the lake. There are several tea pavilions and a temple. This complicated landscape and its revealed views is filled with aesthetic experience and opportunities for meditation. In this we have the essence of a prototype.

Ideally, the Japanese house, like a palace, would be elevated off the ground and situated in the middle of a garden surrounded by a high fence of wood or bamboo for seclusion. A household would probably consist of several interrelated buildings forming courtyards, but the main room would ideally have a southern view. The buildings were simple, of unpainted wood and based on the 3-by-6-foot module of the rice straw tatami mat. Semitransparent movable paper screens divided the interior space. The architecture itself, responding to a wide range of climatic conditions, was highly adaptable. Free flow of air to combat summer humidity was permitted by the incorporation of large doors and window openings and a flexible interior. Shelter from heavy and high rainfall and from the penetration of the summer sun was provided by wide overhanging eaves. Such a design provided frequent views of the garden from inside the house and the veranda, and a physical link between indoor and outdoor. Steps led to the gardens.

Ideally the main garden lay in front of the principle rooms on the south side of the house. Typically it would be a hill and water garden, the most complete form. Other smaller courtyards and entrance spaces would be flat gardens. The view from the main rooms was of prime importance, but other important viewpoints were located within the garden itself. Traditionally, the garden was considered a work of art and the monks and scholars who laid them out, artists. The

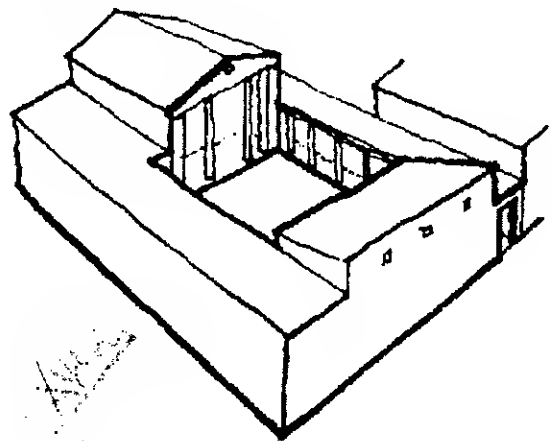
gardens were intended to stimulate a flow of meditation and provide a serene, refreshing, and quiet setting for it. The garden was a symbol of nature and a suggestive representation of landscape.

#### ANCIENT GREECE AND ROME

In contrast to the Orient, there is little concern with gardens in early Greek history. The private house seems to have been a very modest affair in comparison with the important social places such as the agora and gymnasium, theater, and sacred groves. The living rooms of the house faced onto an inner court which was often paved and decorated with statues and plants in pots (Fig. 2.9). Distant palaces of the Greek empire, particularly in the time of Alexander the Great, are said to have had elaborate gardens inspired by those of Persia and Egypt.

The Roman house basically followed the Greek pattern. Houses were built flush to the street with inward-facing rooms connected by colonnades and opening onto an open square or atrium. The gardens were essentially social sanctuaries, enclosed shelters from the fierce sun, wind, dust, and noise of the streets. Since shade was provided by the surrounding portico, there was little need for trees. Planting, if any, was chiefly in pots or raised beds, and stone water

FIGURE 2.9  
Greek house, at Prienne (300 BC)



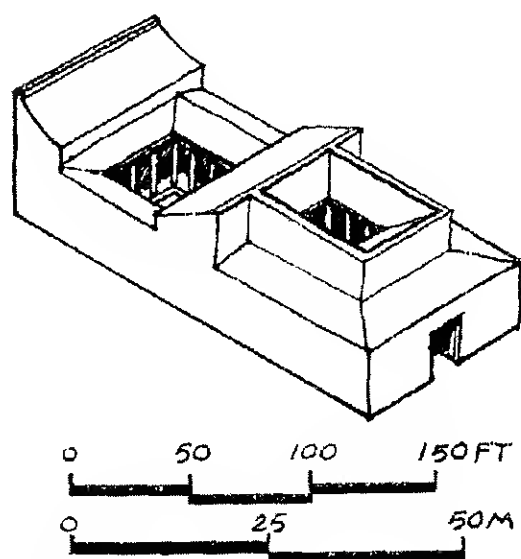


FIGURE 2.10  
Roman house at Pompeii (50 BC)

basins, marble tables, and small statues were frequently used to embellish the courts (Fig. 2.10)

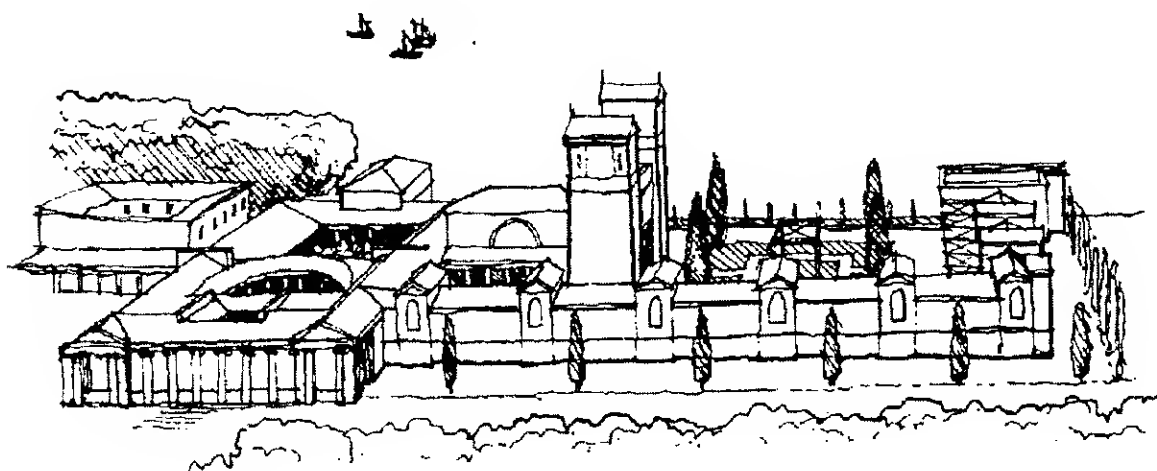
Since much of the original wealth of Rome came from the surrounding agricultural landscape, many aristocrats built villas outside Rome. Cicero is said to have owned about eighteen such country homes. In AD 100 Pliny the Younger built a villa seventeen miles from Rome at Laurentinum, where the garden was chiefly planted with fig and mulberry trees. The for-

mal layout included a well-stocked kitchen garden, cloisters, a summer house, and a terrace with fragrant flowers. The villa, situated on water for a cooler climate, is basically a farm house set in fields (Fig. 2.11). Pliny's Tuscan garden was set on a hillside and incorporated water features and fountains, topiary and colonnades. Hadrian's villa at Tivoli, built between AD 117 and 138, was much more elaborate and extensive, since it was used for many years as a government center. It was in fact a large estate containing many buildings, pools and water basins, terraces and statues. Although the garden units which make up the complex are architectural, there was no overall design concept within which to fit later additions (Fig. 2.12). The layout included a wooded park area, called the Valley of the Tempe, representative of a legendary forest said to have stood at the foot of Mount Olympus. This wooded park area substantiated the claim of advocates of the eighteenth century landscape garden in England that the ancient Romans appreciated nature and deliberately included a symbol of wilderness within their estates.

## ISLAM

The great unifying force of the Prophet Mohammed and Islam underlay the establishment of the powerful and expansive Islamic empire in the seventh century centered in Damascus and Baghdad. With extensions to northern India, north Africa, Sicily and southern Spain, the world of Islam dominated a large part of the known world for eight centuries.

FIGURE 2.11  
Pliny's villa at Laurentinum (100 AD)



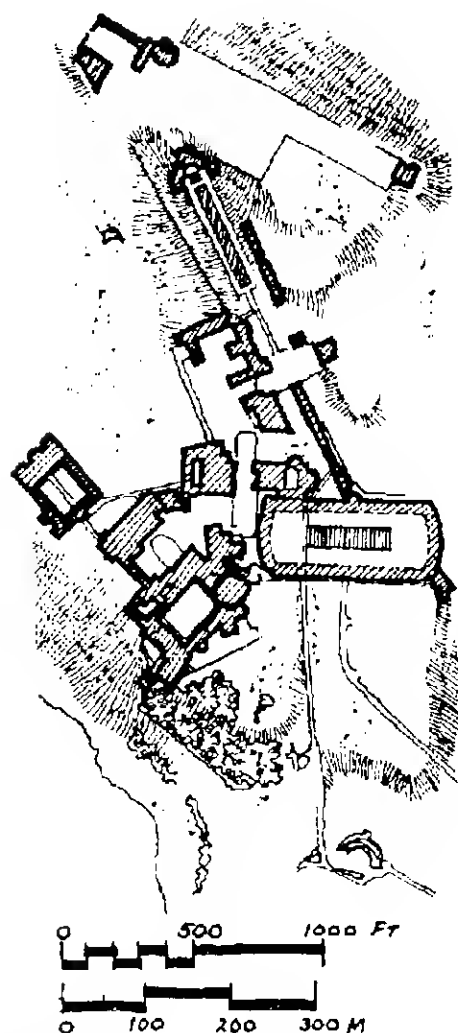


FIGURE 2.12

Hadrian's villa at Tivoli (117-138 AD). A series of buildings and courts built over a long period of time without any coordinating plan. The Valley of the Tevere is in the lower left.

The origin of the basic form in Persia and the Middle East has been discussed. The strength of the Islamic prototype lay in its religious connotations and traditions combined with the development of art and the definition of pleasure and uses of a garden which immense wealth and power made possible. But first and foremost, the concept of the Islamic garden was based on an image of paradise, the well-watered land of milk and honey described in the Koran.

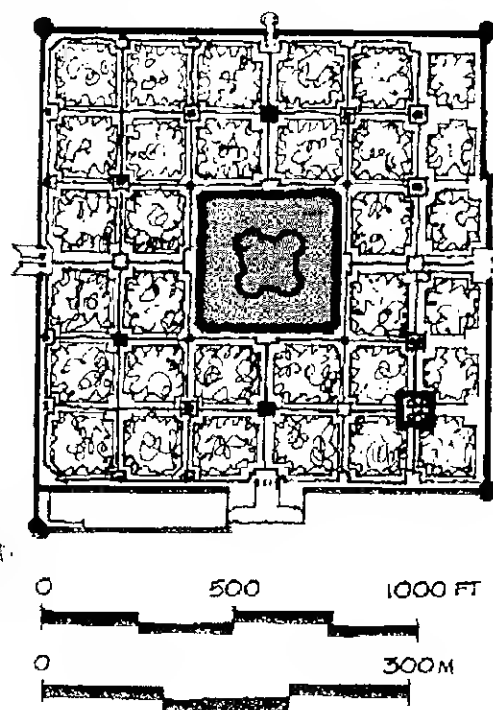
Water was the essential ingredient of the garden for practical and symbolic purposes. In Persia, it was brought to the garden by qanat from aquifers located

at the base of snow-covered mountain ranges. Water flowed by gravity in underground pipes and flooded the channels and tanks around which the garden was organized and served as the irrigation system for the trees and plants in the spaces between. The water would then flow out of the garden and supply the agricultural and domestic needs of the community or village. The system was entirely gravity fed and the gardens, ideally and conceptually flat, were, in fact, made on a slight slope. The water channels were contrived to quarter the garden into four major rectangular portions, symbolizing the cosmos and the four rivers of life (Fig. 2.13).

The organization was axial and geometric, but the growth of plants was profuse and natural, providing an attractive contrast. Trees were planted in rows parallel to the water channels. Many were fruit trees including those of local origin such as pomegranates, dates, and plums, and other imports such as peaches and oranges from China. Certain plants were included for symbolism—the cypress, symbol of death contrasting with the almond, for life and hope. Flowers abounded.

FIGURE 2.13

The plan of the tomb garden of Humayun, Delhi, illustrates the features of a prototypical Islamic garden.



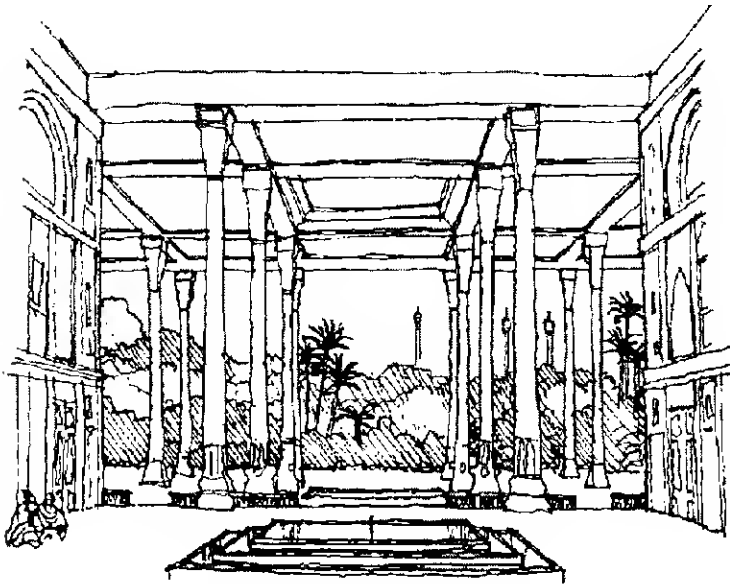


FIGURE 2 14

The concept of the Persian palace included an open relationship between garden and architecture with ever present basins of water

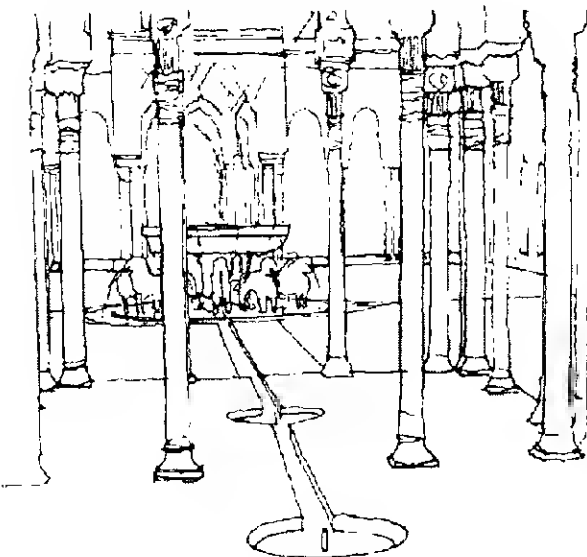
ed, especially roses (an indigenous plant). Roaming in the garden we would find animals such as gazelles and exotic birds. At the center of the garden, associated with the meeting of the water channels and a large geometric pool, there would typically be a raised pavilion, house, or even a palace (depending on the scale) with an open form of architecture providing a free flow of air and an intimate relationship between indoors and out (Fig. 2 14). Finally, the whole garden would be

surrounded by a protective wall with small towers or pavilions at the corners and gates located in each side.

The paradise garden of Islam was essentially an oasis, a secluded retreat protected from the desert winds and dust. Trees provided fruit and shade from the hot sun. Flowers provided color and scent. Water helped to cool the air. The whole was pervaded with supportive symbolism of the religious and philosophical basis of life. These pleasure gardens were favorite resorts of the ruling classes and royal families who used them as settings for indulgence in poetry and music, horticultural pursuits, and for festivals and receptions.

FIGURE 2 15

The Court of the Lyons, Alhambra, Spain

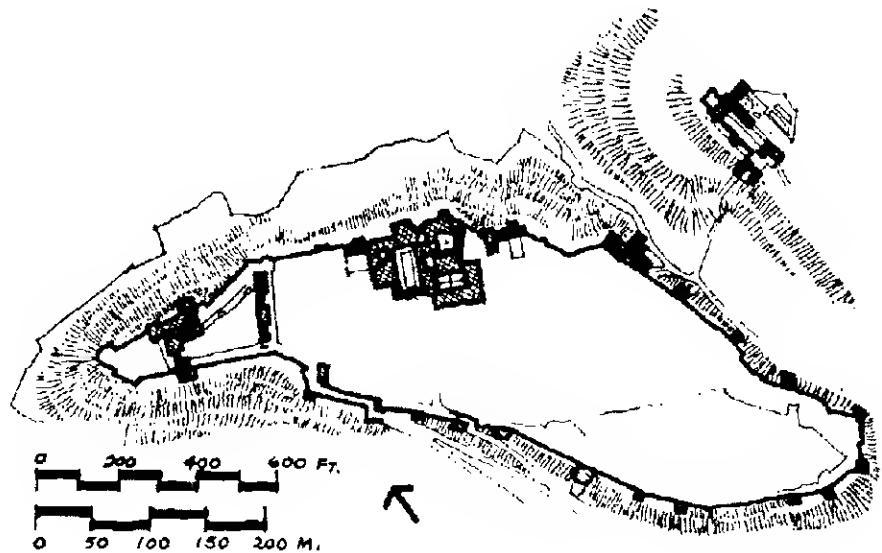


## SPAIN

The Moslem expansion into Egypt and north Africa reached southern Spain by the eighth century AD where an independent colonial settlement lasted until ousted by the Christians at the end of the fifteenth century. Known as the Moors, they introduced irrigation practices and improved agriculture. Remnants of the Roman Empire inspired the adoption of the internal courtyard as a typical form for gardens within the fortified palaces of the rulers. The Spanish version of the Islamic garden is, therefore, a combination of the small Roman courtyard and the Islamic concept of space division and symbolism. The intent was undoubtedly to create gardens like those of Damascus. A comparison of Persian palaces and the Court of the Lyons at Granada illustrates the similarities in architecture, and the use of water (Fig. 2 15). Similar open

FIGURE 2 16

Probable plan of the Alhambra at some point between 1238 and 1358 (more recent additions are omitted). The Generalife is at the upper right.



pavilions permit the free flow of air. Water is used symbolically and as a cooling agent.

The Alhambra was a fortified palace built on high ground. It developed in stages between 1350 and 1500, and, as a result, its series of chambers and enclosed courtyards is without any connecting organization (Fig. 2 16). The form of the complex is a response to the climate. The outside is hostile, hot, and dusty. The inside is shaded, cool, and protected by thick walls. Since the entire structure is perched on high ground, the windows which provide views out over the landscape also permit breezes to blow in. Rooms associated with pools of water thus provide a primitive but successful air conditioning system (Fig. 2 17). Channels of water ran not only in the courtyards but sometimes also actually into and through the buildings, lowering temperatures and providing the cooling sound of running water.

Despite similarities, the Spanish version of the Islamic garden differs from the Persian in that the former encloses the garden in courtyards surrounded by buildings whereas the latter is a walled garden within which the palace is located.

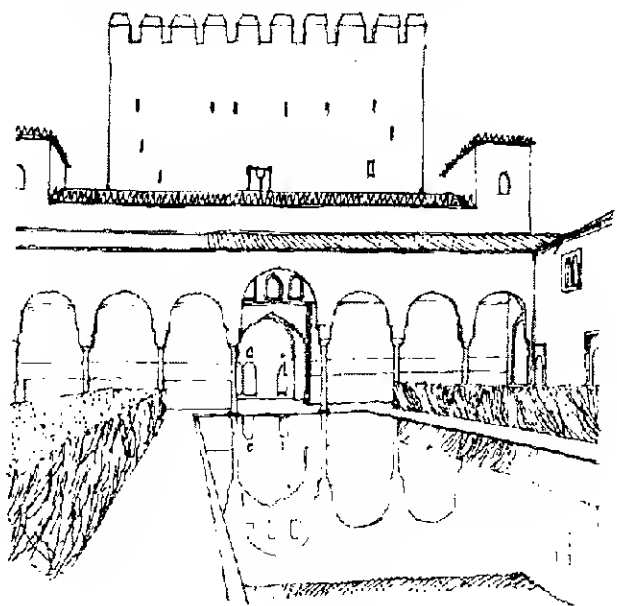
### THE MOGHUL GARDEN

The Islamic garden in India is commonly referred to as the Moghul garden after the Moghul emperors of Turkish origin. Attracted by the riches and wealth of the Hindu temples, the Moslems followed the Mongols, to whom they were related, in creating a military presence in India, sacking the cities and temples and

removing everything of value to Persia. But, in 1526 the Moghuls, in the form of a prince named Babur, came to stay and began a dynasty which persisted and controlled more than half of India through six successive emperors until 1750, lingering on less influentially thereafter. They settled in the great northern plain,

FIGURE 2 17

The Court of the Myrtles, Alhambra, Spain. Breezes blowing from outside across the water basin act as an air conditional system for the palace.





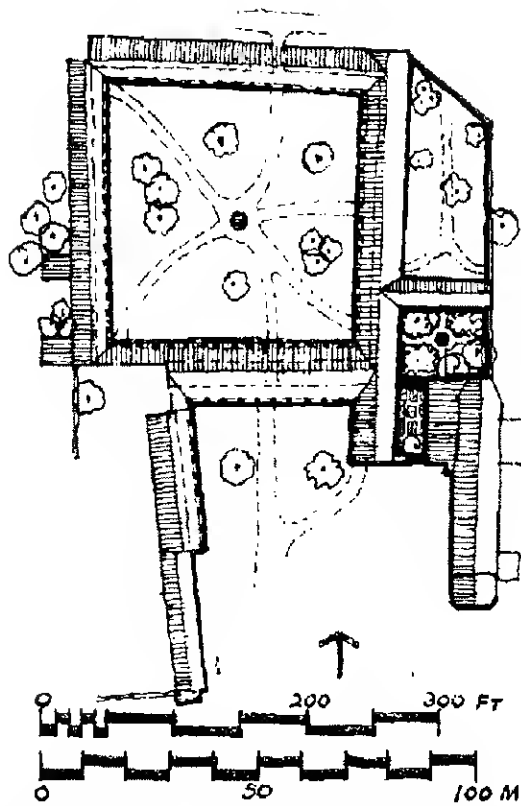


FIGURE 2.18  
Plan of Mission San Juan Capistrano (1776) The missions of California introduced the architectural forms of Spain—arcades and enclosed courtyards.

subject to heat, humidity, and winds, but they also discovered Kashmir, where summer palaces were built. In addition to the Hindu traditions, the Moghuls found established irrigation practices in agriculture and gardens associated with the temples. These were largely devoted to growing flowers which played an important role in the religion. The Hindu garden was informal and profuse and, as a concept, influenced the development of the Chinese prototype when Buddhism was introduced to China.

As one would expect, however, the Moghuls, who were avid garden makers, adopted the Persian garden as their model. In time, differences evolved out of the specific conditions of the region. For example, the narrow rills of water expanded into large expanses which helped to modify the heat. The ultimate expression of this was a pavilion set on an island in a broad lake. It has been suggested that the Moghul garden was a dwelling place in its own right, and was an

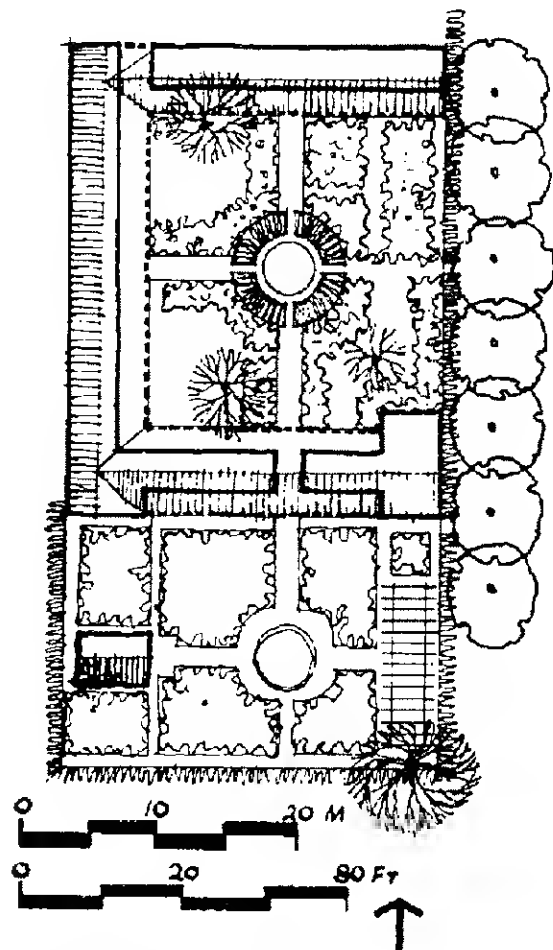


FIGURE 2.19  
Plan of an early California homestead (1858) The central source of water and the architectural enclosure are Spanish in origin

enclosed, protected setting for life, in general, and pleasure, in particular. Horticulture was an obsession and the gardens were filled with all kinds of trees, especially fruit and flowering. Brimming raised channels ran through the gardens and provided the necessary water.

The gardens of Kashmir reflected the different geography in the plants that were grown and being typically linear on sloping sites with more water in the form of cascades and fountains.

Another variation on the Islamic garden theme in India was the tomb garden of the Moghuls. The worship of ancestors, adopted by the Moghuls, was a Mongol concept, not Persian. The tomb was built with

a garden which was used for pleasure until the death of the individual. It was thus enjoyed by both the living and the dead (Fig. 2.13)

### MEXICO AND CALIFORNIA

We have seen that the courtyard, or patio closely linked to the living rooms and corridors of the house is the distinguishing characteristic of the Spanish garden. If we pursue this cultural tradition and climatic type, we find them not surprisingly in the Spanish Empire of the New World. From Mexico, the Spanish influence extended into what are now New Mexico and Texas leaving behind a substantial heritage. Expeditions explored Alta California in the late eighteenth century and the series of missions built by Junipero Serra and his monks between 1769 and 1821 incorporated courtyards with central fountain or well, diagonal paths, and plantings of imported fruit trees, herbs, and flowers, surrounded by arcades (Fig. 2.18). Domestic homesteads, too, adopted similar arrangements, well-suited to the California climate and style of life at that time and clearly derived from the Spanish pattern (Fig. 2.19). This phenomenon and its subsequent revival in the 1920s will be discussed later. But consider at the moment the compelling qualities of this garden concept which evolved from the experience and form of the Persian and early Middle Eastern cultures 5,000 years earlier and 10,000 miles away. In suitable climates, a house type with a private family patio and direct indoor/outdoor connections remains a valid form in the second half of the twentieth century regardless of all social and material advances.

### MEDIEVAL EUROPE

The Medieval period of European history occupied the time between the disintegration of the Roman Empire and the emergence of Modern Europe in the fifteenth century. The sense of community isolation within a hostile landscape is perfectly evoked in Hesse's novel *Narcissus and Goldmund*. The dark ages were characterized by war, turmoil, and plague. Pleasure gardens were unusual within the dense fortified cities and towns (Fig. 2.20). Space which was available was used functionally for growing food or medicinal herbs. Gardens also were devoted to this purpose within the walls of castles and baronial strongholds (Fig. 2.21). In the monasteries more extensive areas were planted with fruit trees, vines, vegetables, and altar flowers (Fig. 2.22), but the most important element was the physic garden planted with sixteen different herbs which were the basis of drugs and medical science

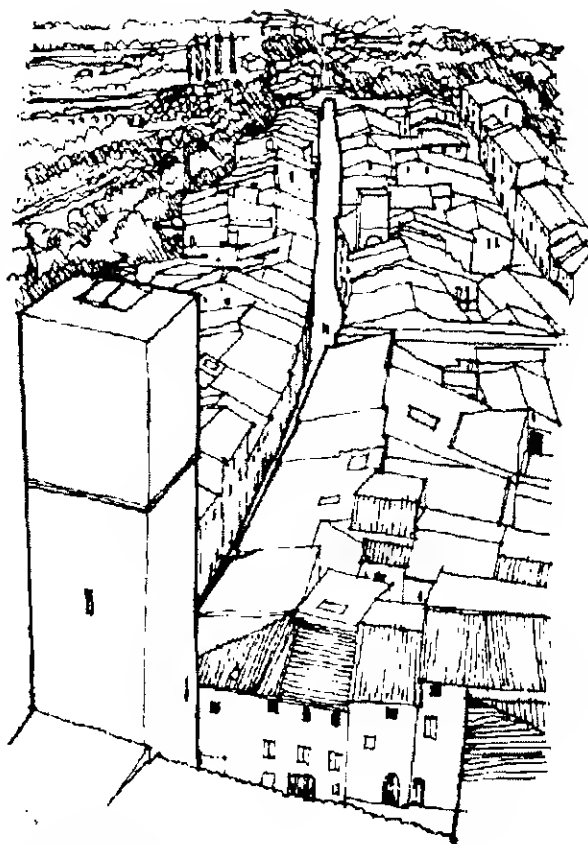


FIGURE 2.20

Italian hill town of the Middle Ages—little space or need for gardens and parks

(Fig. 2.23). These herbs were concocted into lotions and preparations to treat various illnesses. For example, lemon balm was used for dog and scorpion bites, chamomile for disease of the liver and also for migraine. Myrtle was recommended for many ailments including ulcers, spitting of blood, and fractured joints. Toward the end of the period, with the easing of political conflict, the development of trade and accumulation of wealth, Medieval gardens attached to castles and country houses became larger, more elaborate, and designed for pleasure as well as utility. Herb gardens and orchards were important basic elements of the walled gardens, which were embellished with grass-covered seats, fountains, flower beds, arbors, clipped shrubs, and fish ponds. Within the enclosure, pleasure pursuits took place; jesters entertained their lords and ladies who danced, ate meals, and made love in the gardens (Fig. 2.24).



FIGURE 2 21  
Medieval fortified castle with minimal space for a garden

The ballads of troubadours and early manuscripts describe Medieval gardens in terms of an emerging idyllic image of nature. The grass is always intensely green, lawns always sprinkled with fresh wildflowers. The water emanating from fountains and wells is crystal clear. There is no pollution. The air is fresh, the sky is cloudless and bright blue. Trees are in blossom. Birds sing sweetly and mate happily. The time is always spring. The garden provided sensuous pleasures: the scent of flowers and blossom, the coolness of shade cast by the trees and arbors, rest and relax-

ation, and the acoustic delights of bird song and running water. This is the image of the Medieval garden and no doubt it matched the reality. Its intimacy, simplicity, beauty, and delight are appealing and appropriate to twentieth-century lifestyles.

Carl Theodore Sorensen, the Danish landscape historian, suggests that the great sense of craftsmanship associated with these gardens of the Middle Ages forms the basis for the gardener working as an artist in the subsequent history of garden design. Craftsmanship, an essential component of the Middle Ages, with

FIGURE 2 22  
A Medieval monastery with a series of enclosed gardens for herbs, vines, and vegetables.





FIGURE 2.23

A monastery herb garden. Detail of a woodcut by an anonymous artist from *Fior di Virtu* by Cristoforo Bontade, Florence, 1519. The Metropolitan Museum of Art, Harris Brisbane Dick Fund, 1925.

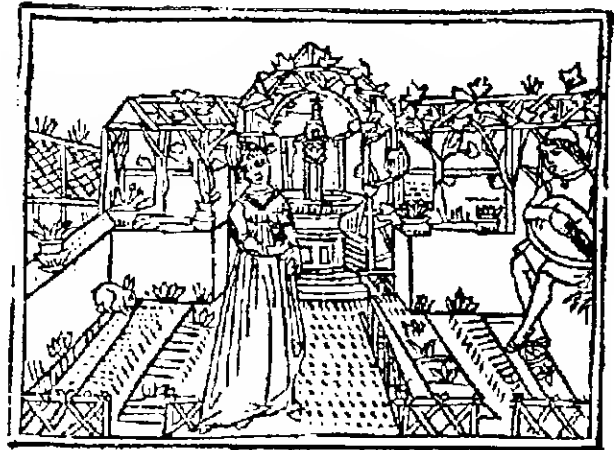


FIGURE 2.24

A Medieval garden. Woodcut from Crescentius' *De Agricultura Vulgare*, Venice, 1519. The Metropolitan Museum of Art, Harris Brisbane Dick Fund, 1934.

its craft guilds and an inventiveness capable of solving all kinds of practical problems, ultimately became associated with aesthetics or ornament. This combination raises life to a higher level or to what British art historian Kenneth Clark defines as civilization.

Thus in gardening the craft produced edges and divisions, plots, dimensions, and shapes suited to cultivation practice, irrigation, tilling, and gathering. But as the idea of an ornamental pleasure garden developed, so the edges and divisions of functional origin became less practical and became ends in themselves. Thus their arrangement became an art as well as a craft.

## ITALY

As the Middle Ages progressed from barbarism into an ordered political system based on commerce, so the wealthy aristocracy, which it supported, turned their attention to refinement. Circumstances made this possible first in Italy in the fifteenth century. Kings, princes, and merchants of the Italian city-states looked back to the Roman Empire for inspiration and guidance. Thus the Renaissance was initiated. Music, art, literature, science, and architecture became major preoccupations of the new enlightened age. In garden design, which held an equal place with the other arts, the most important influence was the writing of Pliny on gardens, paraphrased by Alberti in the second half of the fifteenth century. The theory proposed that the garden be strongly linked to the house by loggias and other architectural extensions into the landscape. The

villa should be located on a hillside. Terraces and stairways were recommended to overcome the difficulties of uneven terrain, and an avenue or axis should link up all elements and spaces of the plan.

The gardens of the early Renaissance were designed as intellectual retreats where scholars and artists could work and debate in the coolness of the countryside away from the heat and frustrations of the cities in summer. The Villa Medici, designed by Michelozzo for Cosimo de' Medici around 1450, is an early expression of Alberti's principles (Fig. 2.25). The banker Medici selected the site on a hillside outside Florence overlooking the plain where it would catch the breeze. Thus it allowed the view which Alberti prescribed. Because of the hillside location, several terraces were required to fit the villa into the land. The entrance driveway followed the contours along the hillside arriving at the top terrace in front of the villa. The house was connected to the garden by a loggia or arcade. However, the relationship between the upper and lower terrace is indirect. The necessary connection was not celebrated with an elaborate staircase as it would have been in the sixteenth century. Behind the house and cut off from the rest of the garden is the *giardino segreto*, or secret garden. This was a place in which to be alone, secret, hidden and quiet, as opposed to the rest of the garden which would be more public, used by visitors and guests, and permeated with servants.

Bramante's plan for the Belvedere Garden of the Vatican (1503) introduced architectural steps as a major garden design feature to link terraces. The great hill-

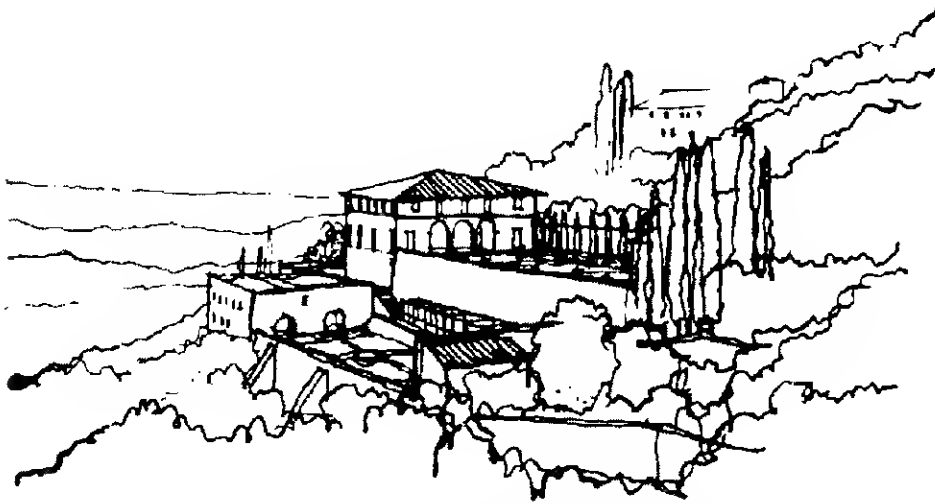


FIGURE 2.25  
The Villa Medici (1450)

side Italian gardens of subsequent dates developed this new element to its fullest potential. The use of water, which was readily available in the hills, favored for summer villas, was also exploited in elaborate gardens.

Perhaps the greatest example of expertise in stairways and waterworks is the Villa d'Este, designed by Pirro Ligorio in 1575 (Fig. 2.26). Here all the essential characteristics of the prototypical Italian garden are in evidence. Dense shade as a contrast to the bright Mediterranean sunlight was provided by the arrange-

ment of avenues of tall cypress, pleached alleys, and arbors. Sculpture and architectural features were placed throughout the garden to enliven it by contrast with natural forms and textures and also to provide an architectural relationship with the house or villa. On the steep slopes, terraces and flat areas were carved out, supported by retaining walls, and connected with a variety of stairs, flights of steps, and ramps. Water, diverted from a river at a higher point, was directed through the gardens in the form of cascades, fountains, jets, and reflecting pools. These provided visual

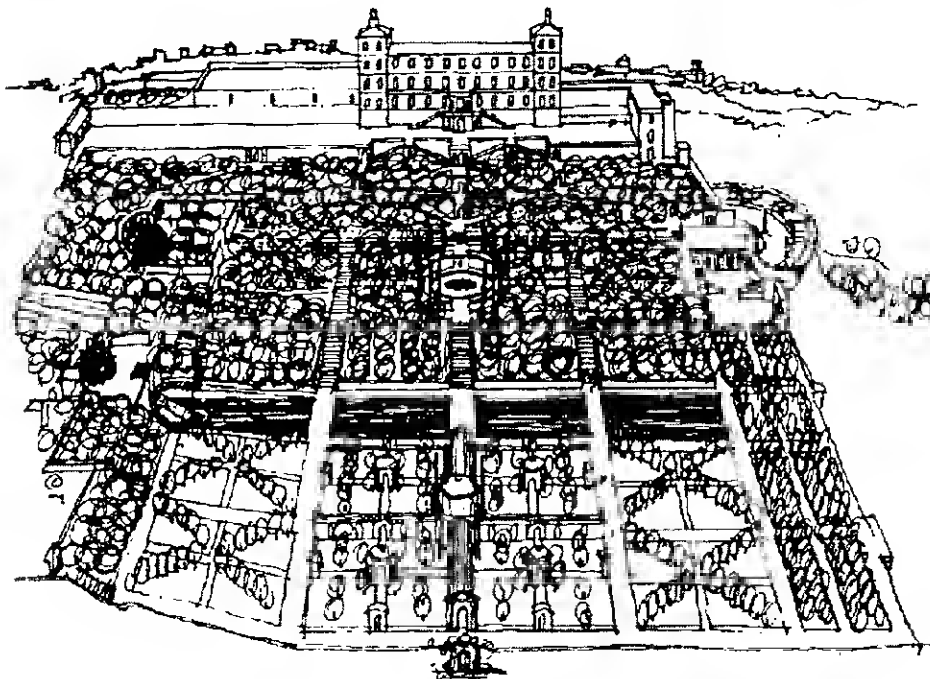


FIGURE 2.26  
The Villa d'Este (1575)

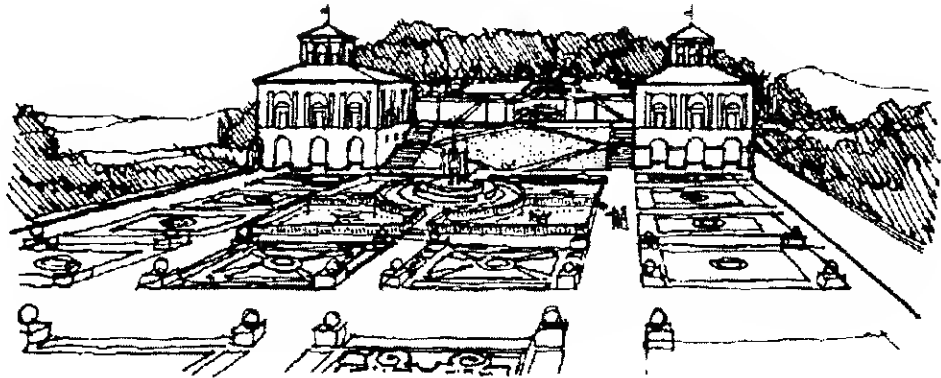


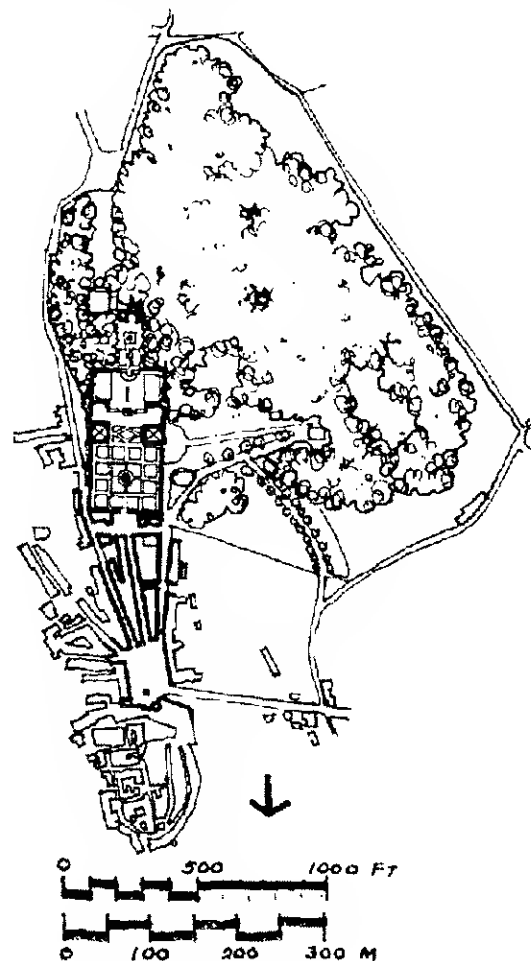
FIGURE 2 27  
The Villa Lante (1560)

and sensuous delight and also served as an irrigation system. The presence of water together with shade contributed to the much desired coolness which the garden was expected to provide. Boxwood and other shrubs were clipped and arranged in linear patterns to be seen from above, but the use of flowering plants was rare. The entire layout was organized axially. Avenues of trees were used to emphasize perspective and to frame views of the landscape beyond the garden. The house and garden were designed in one process, as a unity.

The entrance is at the lower level and the visitor progressed through the garden with its various sculpture and fountains and other features and points of interest to the palace above. This provided a kinetic and sensuous experience, an unfolding of events before entering the building. A spectacular composition, it was designed for effect and to impress those who visited it.

The Villa Lante, built earlier than d'Este, is less Baroque, on a smaller scale, and more intimate (Fig. 2 27). Its design was directly related to an existing village (Fig. 2 28). An avenue runs between its marketplace and the front gate. The villa itself is two houses, or one house split into two by the garden, whose axis divides it. In addition, since the garden runs from the front gate between the villas to the top of the hillside, there is a front garden and a back garden. These two facts make it an unusual and interesting design. Sylvia Crowe speaks of the progression of water from a rustic quality at the top, gradually increasing in sophistication as it is channelized and formed into jets and waterfalls until it reaches the bottom in an elaborate architectural water parterre.<sup>3</sup> On the other hand, since (as in the Villa d'Este) the garden is approached from

FIGURE 2 28  
Plan of the Villa Lante, showing the relationship of the garden to the adjoining village. Note also the large enclosed informal woodland.



<sup>3</sup> Sylvia Crowe, *Garden Design* (London: Country Life, 1958).

the bottom, the actual experience sequence would in all probability be the reverse. The garden is a progression of events with changing views, symbolic meaning, and increasing enclosure. At certain points jets of water were designed to spray unsuspecting guests, and a stone dining table in the upper garden utilized the water in its center for cooling wine and floating dishes back and forth. As one rises up the hill, the parterre on the lower level is revealed and the surrounding town and landscape beyond the wall also become progressively more visible. The enclosed garden was an oasis or paradise in contrast to the misery and squalor in the adjacent village and surrounding agricultural landscape.

In both of these gardens there is an inspired combination of site and concept. The qualities of the site are respectfully molded into a strong architectural composition. This provides an intense contrast between natural and man-made forms, which is often the essence of visual satisfaction in landscape design. Moreover, the site is enriched with detail appropriate and related to the overall concept yet providing variety and surprise within an intelligible whole. This relationship between detail and site plan is handled in such a way that each would be incomplete without the other. These are enduring principles in design.

## FRANCE

Conditions of peace and prosperity essential for a renaissance came to France later. The aristocracy's enthusiasm to assimilate the artistic developments of Italy was dampened by the Hundred Years' War with England until the end of the fifteenth century. In 1495 Charles VIII of France made an expedition to Naples and returned with twenty-one Italian artists, a considerable quantity of *objets d'art*, and ambitions to build in the Italian manner. Subsequently, the gardens of the ancient châteaux at Amboise and Blois were altered and additions were made to reflect the Italian aesthetic. But it was difficult to achieve the prescribed unity between the new gardens and the existing buildings surrounded by protective moats and fortifications. At Blois, due to the lay of the land, new formal gardens were laid out at an oblique angle to the châteaux. At Chantilly, the original castle occupied an island, making a direct house and garden relationship impossible (Fig. 2 29). At Fontainebleau, where Francis I rebuilt and decorated the palace with the help of a second importation of Italian artists in 1525, gardens were laid out beyond the moat separate from the châteaux.

It became obvious that only by building completely new châteaux and gardens at the same time could the

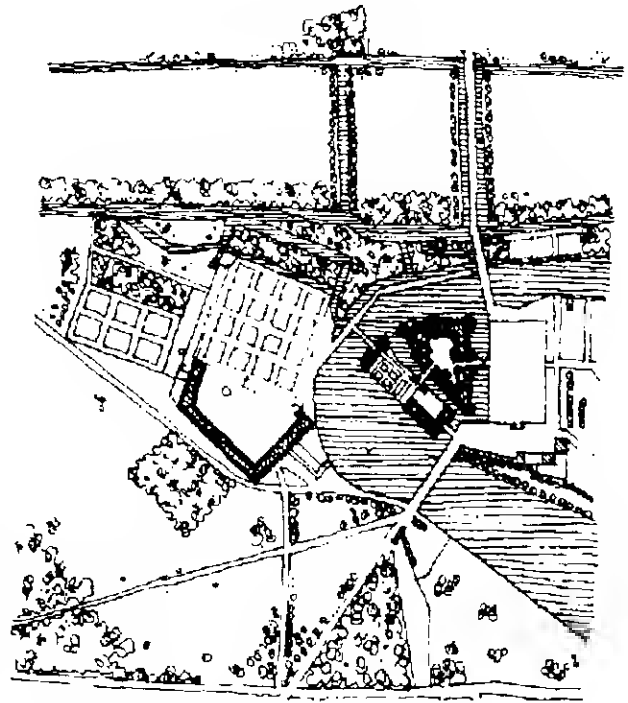


FIGURE 2 29

Chantilly, France in the sixteenth century. A direct relationship between the ancient castle and the new formal gardens is prevented by the defensive moat.

proper effect be realized. This was done at Ancy-le-franc (1546) and Château d'Anet (1548) and at numerous places thereafter. However, even though the protective moat served no defensive function after the invention of gunpowder, the French insisted on including a symbolic moat around many of the new châteaux.

In the seventeenth century France reached her greatest period of wealth and power and, in addition, became the major arbiter of taste throughout Europe. The French garden is particularly noted for its use of parterres. The origin of the parterre lay in the use of low hedges to separate one kind of herb from another in the Medieval physic garden. The functional divisions became ornamental in themselves and frequently there was nothing contained within them. Sometimes colored gravel or clay and sometimes flower and foliage plants were used. The optimum effect was seen from above. Jacques Boyceau developed the art of the parterre and a theory of garden design which prepared the ground for the celebrated work of André Le Nôtre in the mid-seventeenth century. Whereas the Italian gardens were typically designed by architects,

in France they were designed by professional gardeners trained in design.

The climate and landscape of northern France played a role in determining the basic characteristics of the French garden and also accounted for some differences between the prototypical French and Italian gardens. Northern France is comparatively flat and wooded. The gardens thus tended to appear as clearings in a forest and the gentle topography had to be treated with subtlety to create distinct differentiation of levels or terraces from which to view the parterres. Views out were limited. Slowly moving rivers and low-lying marshland lent themselves to the development of canals, moats, and expanses of still water. The use of fountains and cascades is thus less typical in the French than in the Italian garden. The few fountains in northern France were achieved at great expense and with considerable ingenuity.

The strong axial layout, symmetry, mathematical proportions, and infinite perspective of the seventeenth-century French garden reflect the wealth and power and rigid social structure of France and the evolving concept of man's ascendancy over nature. Hunting practices in the forest land surrounding the gardens required the cutting of alleys radiating from a central point. These provided sight lines and facilitated maneuverability. This "star" pattern was incorporated in the design of the garden and also in urban form, as demonstrated in the radiating avenues of Versailles, Paris, and Washington, D. C.

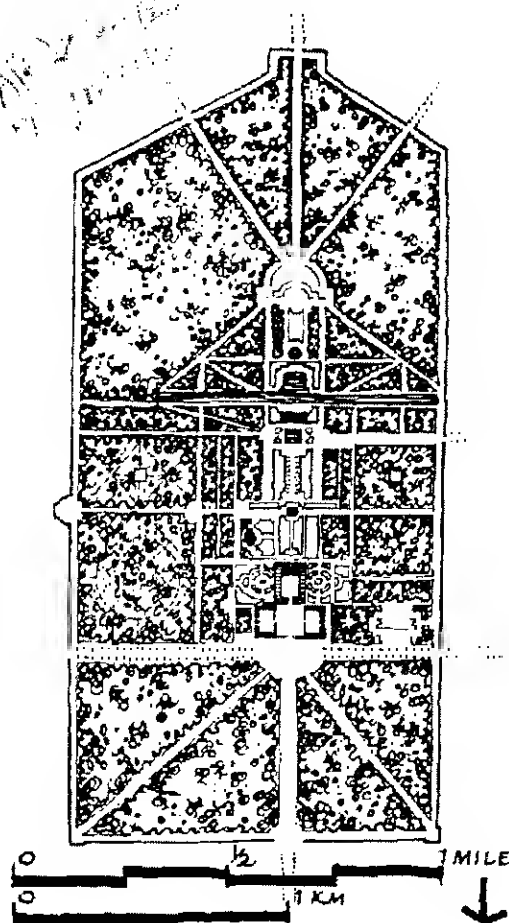
Two masterpieces by André Le Nôtre, Vaux-le-Vicomte (1650-1661) (Figs. 2.30 and 2.31) and Versailles (1661) (Figs. 2.32 and 2.33), represent the ultimate expression of the concept of a geometrically ordered landscape. Vaux is a perfect example of house and garden unity. It was designed by a team consisting of André Le Nôtre, the gardener, and Le Brun and Le Vau, architects. The scale of the enterprise was, for those days, enormous. The project provided employment for hundreds of workers, some of whose families were displaced by the removal of three villages which lay in the way of the design. The area of the estate measured approximately  $\frac{3}{4}$  mile by  $1\frac{1}{2}$  miles. However, the formal garden itself was a smaller area around the palace. The plan looks simple, rigid and symmetrical, but it is actually rich and varied on either side of the main axis with a number of surprises. The land was carefully shaped as it sloped away from the palace in such a way that the river, which was canalized, could not be seen until the last minute. In addition, from a particular position looking back along the axis, the entire facade of the palace is seen reflected in the square pond. The garden is a mathematical

exercise with carefully worked out proportions and optical effects. The palace itself is surrounded by a moat, a symbolic feature carried over from earlier traditions.

The garden belonged to Fouquet, Finance Minister to Louis XIV, and was frequented by large crowds of courtiers and officials, nobles, and their servants. It was a stage set for display and ceremony where fêtes and concerts were held, boating took place on the river and hunting in the surrounding park, and the whole environment and social routine had all the qualities of an exclusive country club.

The King, jealous of Fouquet's social and artistic triumph, imprisoned him and took his design team to a small hunting lodge at Versailles. Within seven years, the original garden of 250 acres was enlarged to

FIGURE 2.30  
Plan of Vaux-le-Vicomte (1650-1661).





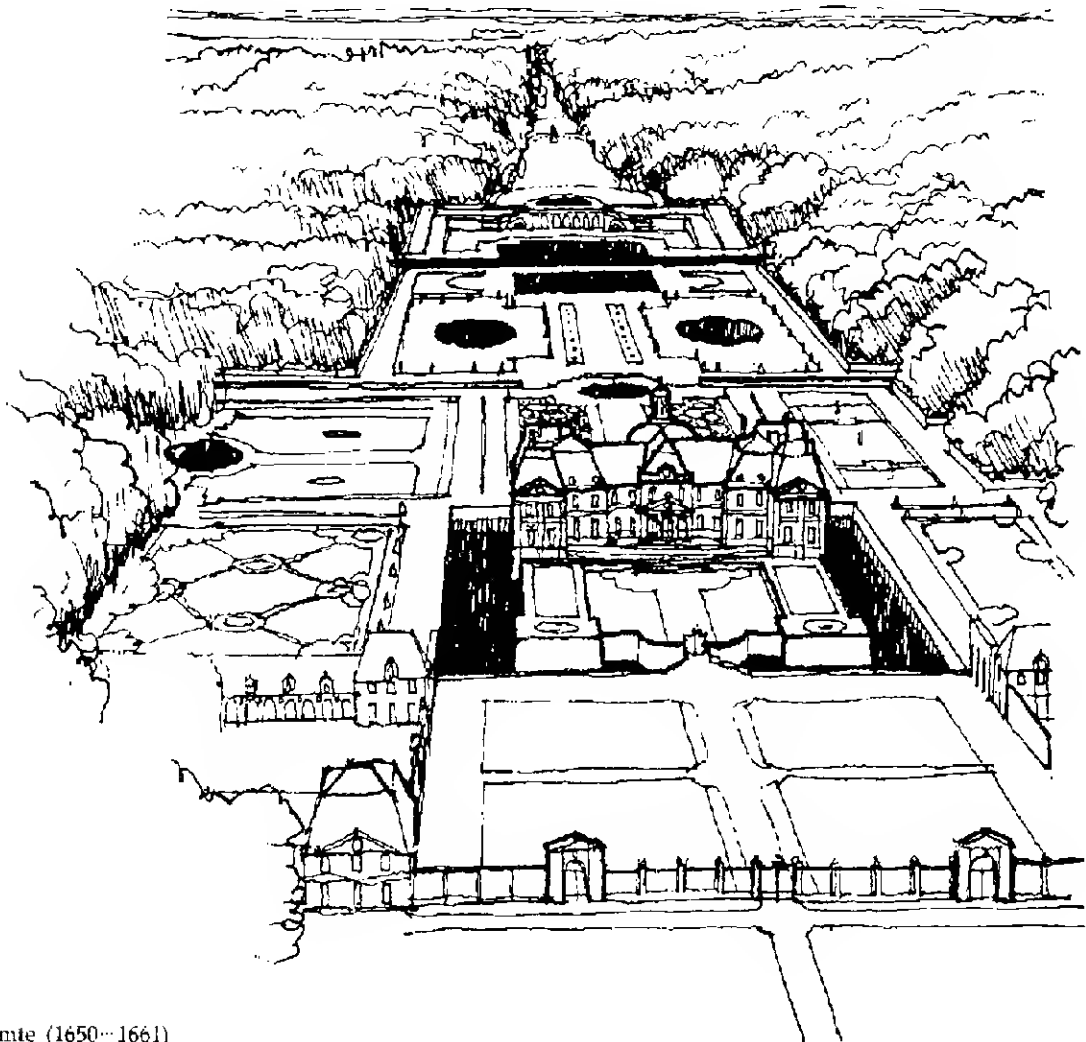


FIGURE 2.31  
Vaux-le-Vicomte (1650–1661)

an estate of 15,000 acres, and the facade of the palace was extended to 1,325 feet in length. Although the garden itself may seem small in relation to the entire planned area, its axial lines are extended out into the landscape in the form of hunting rides forming star intersections where they meet and reradiate. It was an even greater undertaking than Vaux-le-Vicomte.

In spite of the technical difficulties, there were 14,000 fountains at Versailles. The palace was the focus of a new city of Versailles built to house the 20,000 people connected with the French Court. The palace itself accommodated 1,000 noblemen with their 4,000 servants. The distance from the palace to the beginning of the canal is  $\frac{3}{4}$  mile (a gentle slope). The canal is 4,000 feet or almost 1 mile long beyond that and 300 feet wide. The principles of the French garden are clearly illustrated; the strong central axis leading to

the horizon runs straight through the Sun King's bedchamber. It is a clear expression of the power of man over nature and, of course, of one man over other men, of divine right. The surrounding forest forms a strong enclosure to the garden. Views out are restricted to those provided by the alleys. The garden space is tightly closed around the main axis at the tapis vert. Within the forest to the left and right of the central open space are all kinds of gardens, waterworks, small theaters, and other contrived fantasies for the amusement of King and courtiers. As at Vaux-le-Vicomte, the gardens were designed for use by many people at one time. Versailles was the center of government with all the diplomatic, political, and entertainment functions that it implied. The gardens provided an outdoor setting in keeping with the grandeur of the palace.

FIGURE 2 32  
Plan of Versailles (1662-1665)

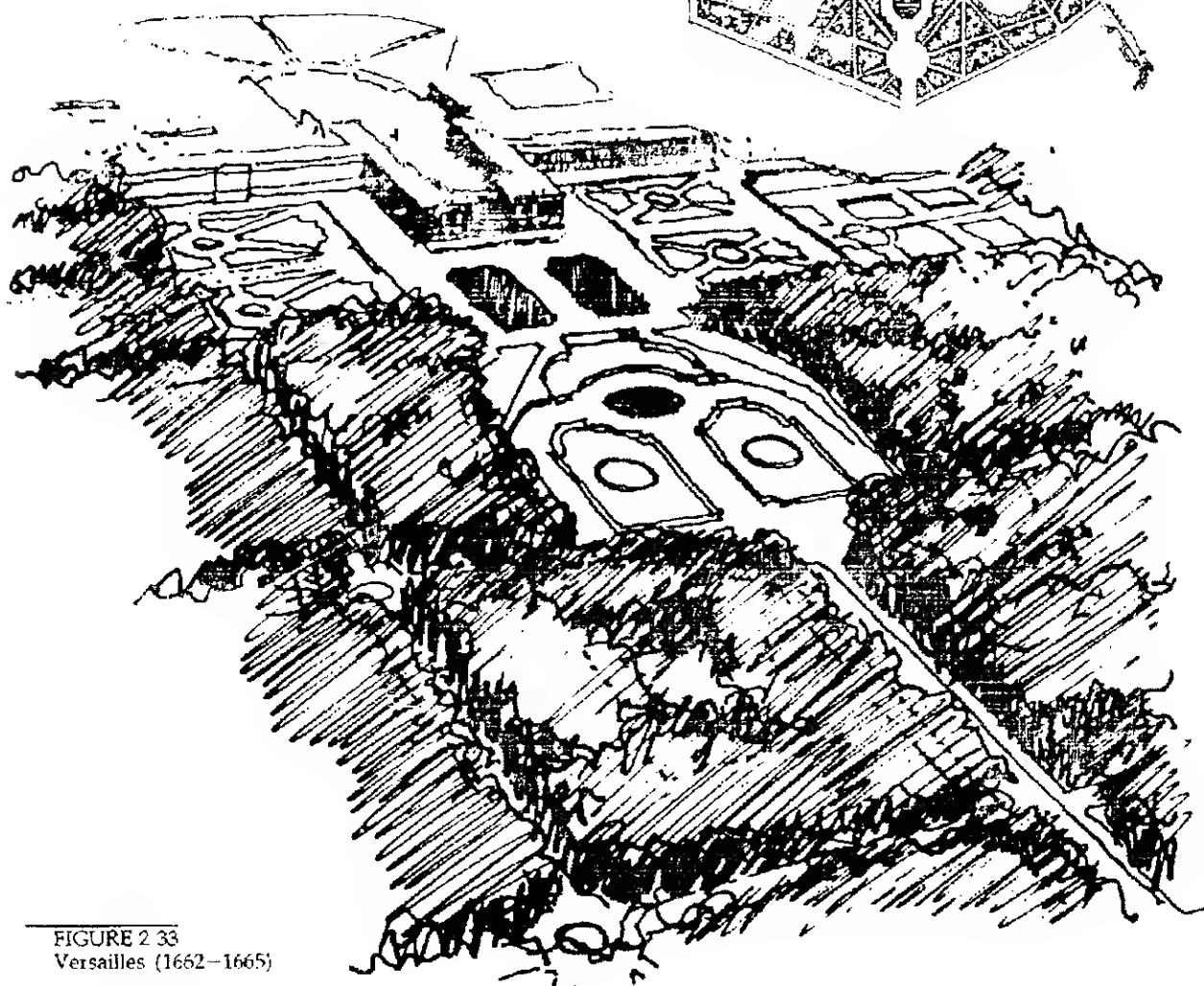
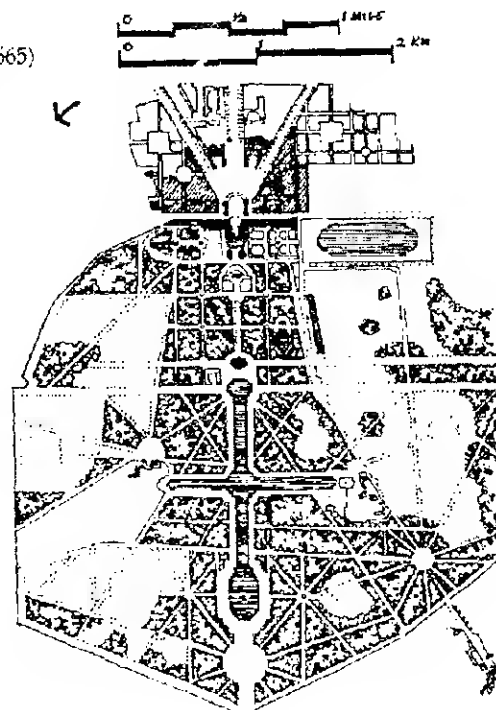


FIGURE 2 33  
Versailles (1662-1665)